

542,185

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
5 August 2004 (05.08.2004)

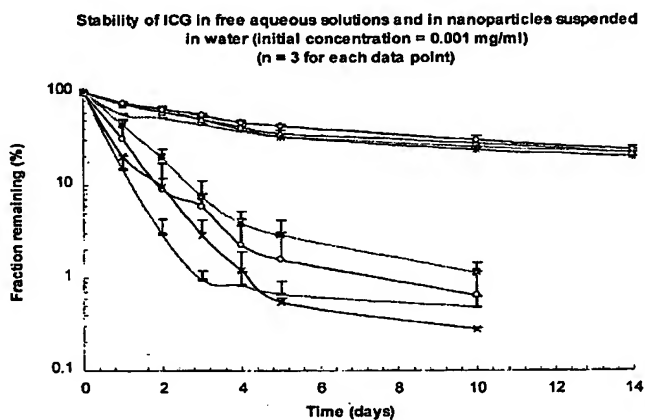
PCT

(10) International Publication Number
WO 2004/064751 A2

- (51) International Patent Classification⁷: **A61K** Sanil [IN/US]; 3135 Johnson Avenue #155, Riverdale, NY 10463 (US).
- (21) International Application Number: PCT/US2004/001472 (74) Agent: VASSIL, John, C.; MORGAN FINNEGAN, LLP, 345 Park Avenue, New York, NY 10154 (US).
- (22) International Filing Date: 15 January 2004 (15.01.2004) (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 60/440,658 16 January 2003 (16.01.2003) US
- (71) Applicant (for all designated States except US): ST. JOHNS UNIVERSITY NEW YORK [US/US]; 8000 Utopia Parkway, Jamaica, NY 11439 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): SADOQI, Mostafa [MA/US]; 7809 166Th Street, Fresh Meadows, NY 11366 (US). SHAO, Jun [CN/US]; 67-12 Utopia Parkway, Fresh Meadows, NY 11365 (US). SAXENA, Vishal [IN/US]; 170-15, 84th Road, Jamaica, NY 11432 (US). KUMAR,
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: NANOPARTICLE BASED STABILIZATION OF IR FLUORESCENT DYES



(57) Abstract: This invention relates to a highly effective nanoparticle system for stabilizing near-infrared (near-IR) fluorescent dyes such as indocyanine (ICG) in order to enhance the dye's utility for biomedical application. This invention further relates to nanoparticles comprised of biodegradable polymer materials such as poly(dl-lactide-co-glycolide)(PLGA). The invention also relates to methods of preparing the nanoparticle-entrapped dyes, as well as methods for using them in bioimaging, diagnosis, and treatment of disease. The present invention also relates to compositions and kits comprising nanoparticle-entrapped dyes.

A2
WO 2004/064751



Published:

— *without international search report and to be republished
upon receipt of that report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.